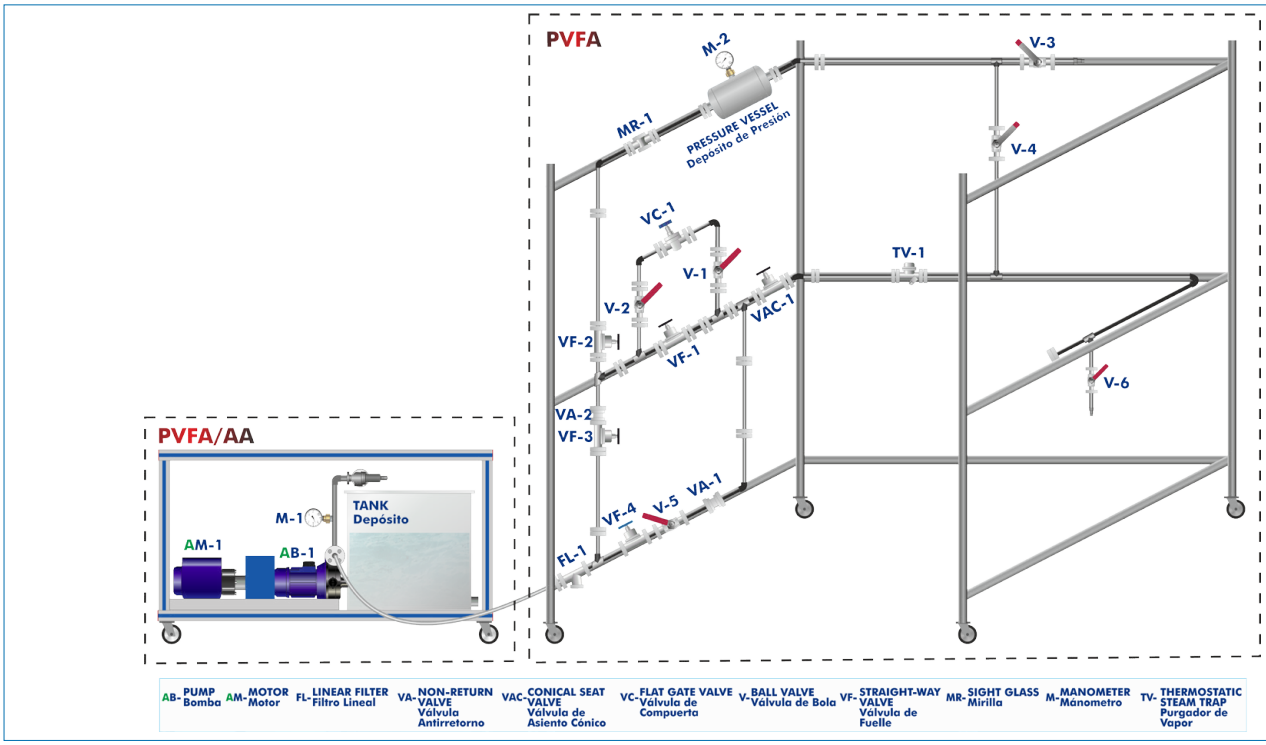
Engineering and Technical Teaching Equipment

Pipes, Valves and Fittings Assembly Unit

PVFA

www.edibon.com
PRODUCTS
8.- FLUID MECHANICS

PROCESS DIAGRAM AND UNIT ELEMENTS ALLOCATION



Certificate of Approval of the Quality Management System

European Union Certificate
(total safety)

UL and CSA Regulations
(All our products are manufactured according to current UL and CSA regulations)

Certificate of Approval of the Environmental Management System

Worlddidac Association Certificate of Membership

INTRODUCTION

Water is essential both at home and at industrial level, giving rise to a large field of application concerning water storage and distribution. For this reason, the training of professionals related to the discipline, particularly to the design, installation and maintenance of piping systems for water distribution is fundamental.

In this sense, the Pipes, Valves and Fittings Assembly Unit, "PVFA", designed by EDIBON, offers a complete training plan in the field of hydraulic systems, covering from the design and selection of components and the mounting and installation of elements to their setting up.

GENERAL DESCRIPTION

The Pipes, Valves and Fittings Assembly Unit, "PVFA", designed by EDIBON, consists of a solid and rigid U-shaped frame where a series of real pipes and fittings are mounted to form a complete hydraulic system.

A filter, a sight glass and a pressure vessel, as well as a technical description of all the components, useful to design and size the installation, are included together with a great amount of different valves.

All the elements include connection flanges that allow for working in group to easily mount and dismount each accessory repeatedly.

After mounting the system, it can be tested with the water supplied by a portable Unit for Assembly and Alignment of Pumps and Driving Motor, "PVFA/AA". It is equipped with a centrifugal pump driven by an electric motor, an additional tank and a manometer to measure the water pressure at its outlet. Apart from supplying water, the portable unit will enable the user to practice with the aligning and starting process.

SPECIFICATIONS

"U" shaped frame to mount the pipes.

The unit includes wheels to facilitate its mobility.

Diagram in the front panel with distribution of the elements similar to the real one.

Pipe circuit formed by tubes, bends, T-shaped pieces and reducers (DN15, DN25 and DN40).

Pressure vessel with manometer:

- DN15 connector for PN16.
- Manometer, range: 0 – 10 bar.

Connecting elements:

- Types: Flange and cutting ring screw fitting.
- Sizes: DN40, DN25, DN15 and G½".

Set of valves and accessories made of stainless steel and cast iron:

- Gate valve: DN40 for PN16.
- Four bellows valves: DN15 and DN25 for PN16.
- Three ball valves: DN40 and DN15 for PN16.
- Three ball valves with cutting ring screw fitting in G½".
- Condensate drain: DN25 for PN16.
- Sight glass: DN15 for PN25.
- Two check valve: DN15 for PN16.
- Flanged filter in DN15 for PN16.
- Conical seat valve: DN25 for PN16.

Two manometers, range: 0 – 10 bar.

Set of tools.

Ladder.

Cables and accessories, for normal operation.

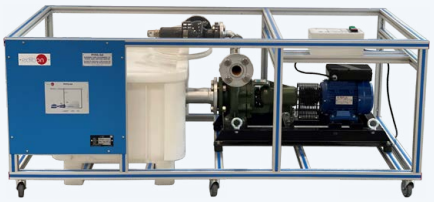
Manuals: This unit is supplied with the following manuals: Required services, Assembly and Installation, Starting-up, Safety, Maintenance & Practices manuals.

PVFA detail

Additional recommended elements (Not included):

- PVFA/AA. Unit for Assembly and Alignment of Pumps and Driving Motor.

Additional recommended elements (Not included)

PVFA/AA. Unit for Assembly and Alignment of Pumps and Driving Motor	
Anodized aluminum frame and panels made of painted steel. The unit includes wheels to facilitate its mobility. Diagram in the front panel with distribution of the elements similar to the real one. Centrifugal pump: 580 l/min; 18.8 m. Single-phase motor. Storage tank, volume: 140 l. Manometer, range: 0 – 10 bar.	

EXERCISES AND PRACTICAL POSSIBILITIES

1.- Principles and main elements of a hydraulic system.
2.- Construction and operation of fittings and valves, pipes and system accessories.
3.- Design of diagrams and planning of installations according to requirements.
4.- Selection of elements and material required for the assembly.
5.- Assembly of the installation in accordance to the diagram.
6.- Understanding and interpretation of industrial diagrams and associated technical documentation.
7.- Start up and operation of the constructed system (required PVFA/AA accessory).

REQUIRED SERVICES

- Water supply and drain.

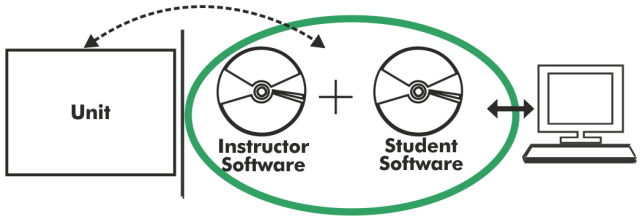
DIMENSIONS AND WEIGHTS

PVFA:
- Dimensions: 1500 x 2000 x 2000 mm approx.
  (59.05 x 78.74 x 78.74 inches approx.)
- Weight: 280 Kg approx.
  (617 pounds approx.)

ADDITIONAL RECOMMENDED ELEMENTS (Not included)

- PVFA/AA. Unit for Assembly and Alignment of Pumps and Driving Motor.

PVFA/ICAI. Interactive Computer Aided Instruction Software:



With no physical connection between unit and computer, **this complete software package consists of an Instructor Software (EDIBON Classroom Manager -ECM-SOF) totally integrated with the Student Software (EDIBON Student Labsoft -ESL-SOF)**. Both are interconnected so that the teacher knows at any moment what is the theoretical and practical knowledge of the students.

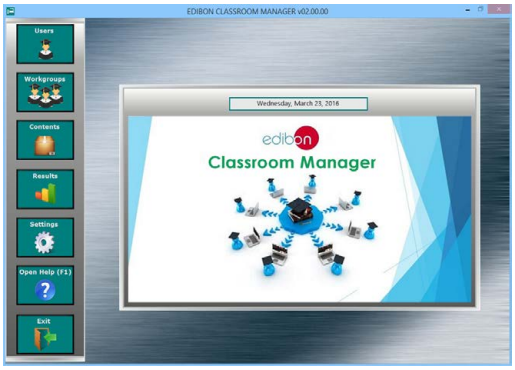
Instructor Software

- ECM-SOF. EDIBON Classroom Manager (Instructor Software).

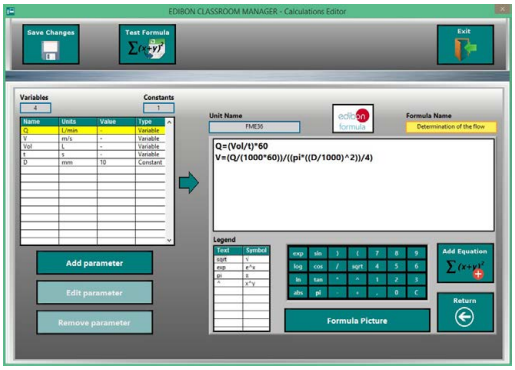
ECM-SOF is the application that allows the Instructor to register students, manage and assign tasks for workgroups, create own content to carry out Practical Exercises, choose one of the evaluation methods to check the Student knowledge and monitor the progression related to the planned tasks for individual students, workgroups, units, etc... so the teacher can know in real time the level of understanding of any student in the classroom.

Innovative features:

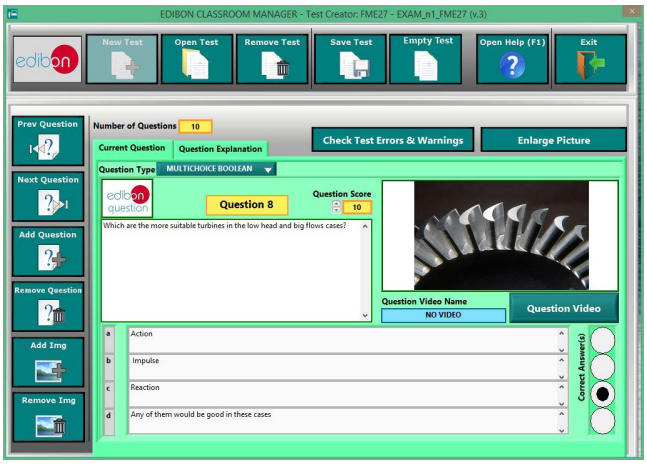
- **User Data Base Management.**
- **Administration and assignment of Workgroup, Task and Training sessions.**
- **Creation and Integration of Practical Exercises and Multimedia Resources.**
- **Custom Design of Evaluation Methods.**
- **Creation and assignment of Formulas & Equations.**
- **Equation System Solver Engine.**
- **Updatable Contents.**
- **Report generation, User Progression Monitoring and Statistics.**



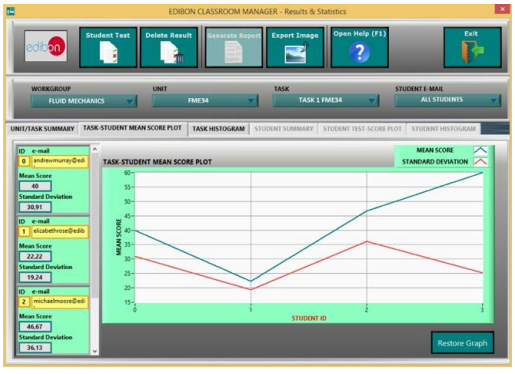
ECM-SOF. EDIBON Classroom Manager (Instructor Software) Application Main Screen



ECAL. EDIBON Calculations Program Package - Formula Editor Screen



ETTE. EDIBON Training Test & Exam Program Package - Main Screen with Numeric Result Question



ERS. EDIBON Results & Statistics Program Package - Student Scores Histogram

Optional

Student Software

- ESL-SOF. EDIBON Student Labsoft (Student Software).

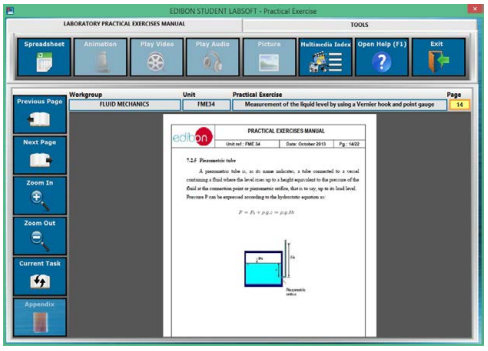
ESL-SOF is the application addressed to the Students that helps them to understand theoretical concepts by means of practical exercises and to prove their knowledge and progression by performing tests and calculations in addition to Multimedia Resources. Default planned tasks and an Open workgroup are provided by EDIBON to allow the students start working from the first session. Reports and statistics are available to know their progression at any time, as well as explanations for every exercise to reinforce the theoretically acquired technical knowledge.

Innovative features:

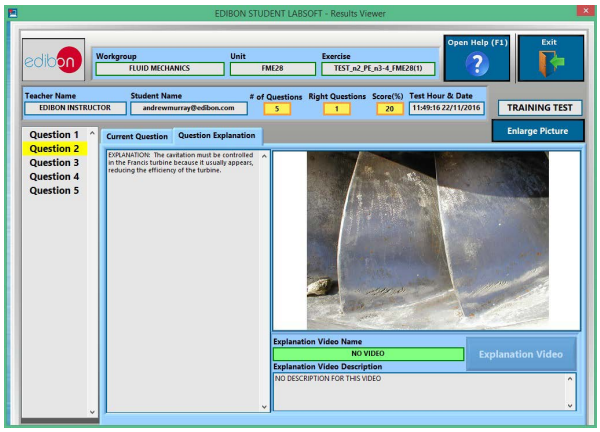
- **Student Log-In & Self-Registration.**
- **Existing Tasks checking & Monitoring.**
- **Default contents & scheduled tasks available to be used from the first session.**
- **Practical Exercises accomplishment by following the Manual provided by EDIBON.**
- **Evaluation Methods to prove your knowledge and progression.**
- **Test self-correction.**
- **Calculations computing and plotting.**
- **Equation System Solver Engine.**
- **User Monitoring Learning & Printable Reports.**
- **Multimedia-Supported auxiliary resources.**

For more information see **ICAI** catalogue. Click on the following link:
www.edibon.com/en/interactive-computer-aided-instruction-software

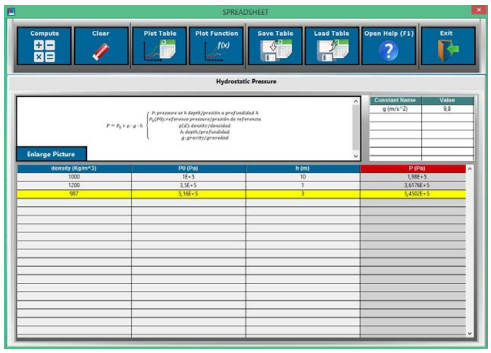
ESL-SOF. EDIBON Student LabSoft (Student Software) Application Main Screen



EPE. EDIBON Practical Exercise Program Package Main Screen



ERS. EDIBON Results & Statistics Program Package - Question Explanation



ECAL. EDIBON Calculations Program Package Main Screen

✱ Specifications subject to change without previous notice, due to the convenience of improvement of the product.

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REPRESENTATIVE: